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DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The invention listed below is owned by an agency of the U.S. Government and is available for licensing to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

FOR FURTHER INFORMATION CONTACT: Elizabeth Pitts, Ph.D., 240-669-5299; elizabeth.pitts@nih.gov. Licensing information and copies of the patent applications listed below may be obtained by communicating with the indicated licensing contact at the Technology Transfer and Intellectual Property Office, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rockville, MD, 20852; tel. 301-496-2644. A signed Confidential Disclosure Agreement may be required to receive any unpublished information.

SUPPLEMENTARY INFORMATION: Technology description follows:

Monoclonal Antibodies to Prevent or Treat SARS-CoV-2 Infection

Description of Technology:

The ongoing COVID-19 pandemic, caused by severe respiratory syndrome coronavirus 2 (SARS-CoV-2), has created an immense public health, social, and economic burden. Variants of concern continue to emerge that have increased transmissibility, pathogenicity, or both and that reduce the effectiveness of current therapeutics and vaccines. Thus, there is a great need for broadly protective therapeutics.

This technology relates to two monoclonal antibodies targeting the spike protein of SARS-CoV-2 that between the two have picomolar activity against wild-type SARS-CoV-2 and the Alpha, Beta, Delta, and Omicron variants of concern. Additionally, one of the antibodies recognizes a highly-conserved epitope of the spike protein. Treatment with either monoclonal antibody before or after challenge with SARS-CoV-2 reduced symptoms and viral load in nasal turbinate and lung tissue in the golden Syrian hamster model. This monoclonal antibody technology has great potential to treat SARS-CoV-2 infections and may provide protection against future variants of concern.

This technology is available for licensing for commercial development in accordance with 35 U.S.C. § 209 and 37 CFR Part 404.

Potential Commercial Applications:

- Treatment for SARS-CoV-2 infection
- Prophylaxis treatment to prevent or reduce SARS-CoV-2 infection
- Diagnostic for SARS-CoV-2 infection

Competitive Advantages:

- Broad and potent neutralization of several variants of concern, including Omicron

Development Stage:

- In vivo data assessment (animal)

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Intellectual Property: HHS Reference No. E-132-2021– U.S. Provisional Application No. 63/296,380, filed January 4, 2022.

Licensing Contact: To license this technology, please contact Elizabeth Pitts, Ph.D., 240-669-5299; elizabeth.pitts@nih.gov, and reference E-132-2021.

Collaborative Research Opportunity: The National Institute of Allergy and Infectious Diseases is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize this technology. For collaboration opportunities, please contact Elizabeth Pitts, Ph.D., 240-669-5299; elizabeth.pitts@nih.gov.

Dated: February 1, 2022.

Surekha Vathyam,

Deputy Director,

Technology Transfer and Intellectual Property Office,

National Institute of Allergy and Infectious Diseases.

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